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## **CLAIMS**

## What is claimed is:

- 1. A method for accurate design rule evaluation, said method comprising: constructing sample design portions in a simulator; sweeping simulated design parameters independently; generating a hypermatrix of results of said sweeping; and storing said hypermatrix in memory.
- 2. The method of claim 1 wherein said design parameters are selected from structural beam widths, beam lengths, beam heights, structural types, materials, FET gate widths, FET gate lengths, capacitance, resistance, and inductance.
  - 3. The method of claim 1 further comprising: extracting said swept parameters as indices; and retrieving said results from said pregenerated hypermatrix.
- 4. The method of claim 3 wherein said retrieving comprises looking up said results in said hypermatrix using said indices.
- 5. The method of claim 3 further comprising using said results to evaluate an individual design.
- 6. The method of claim 5 wherein said individual design is selected from VLSI design, electronic circuit design, civil engineering design, and mechanical engineering design.
- 7. The method of claim 1 wherein said hypermatrix of results is a mathematical representation relating an array of mathematical functions of multiple independent variables to arrays of said multiple independent variables.
- 8. The method of claim 1 wherein said method is performed using computer executable software code.

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9. A system for accurate design rule checking, said system comprising: means for constructing sample design portions in a simulator; means for sweeping simulated design parameters independently; and means for generating a hypermatrix of results of said sweeping.

- 10. The system of claim 9 further comprising:means for retrieving said results from said generated hypermatrix.
- 11. The system of claim 10 further comprising: means for using said results to evaluate an individual design.
- 12. The system of claim 10 further comprising: means for extracting said swept parameters as indices.

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